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IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF MONTANA  
GREAT FALLS DIVISION

MONTANA ENVIRONMENTAL  
INFORMATION CENTER, *et al.*,

Plaintiffs,

v.

UNITED STATES BUREAU OF  
LAND MANAGEMENT, *et al.*

Federal Defendants,

v.

AMERICAN PETROLEUM  
INSTITUTE, *et al.*

Intervenor Defendants.

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) No. CV-11-15-GF-SEH

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**MEMORANDUM OF LAW  
IN SUPPORT OF MOTION  
FOR SUMMARY JUDGMENT**

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## **EXHIBIT LIST**

- EXHIBIT 1** Standing Declaration of Steve Gilbert
- EXHIBIT 2** Standing Declaration of Wade Sikorski
- EXHIBIT 3** Lesica, P., *Can Regeneration of Green Ash (*Fraxinus pennsylvanica*) be Restored in Declining Woodlands in Eastern Montana?*, Rangeland Ecol Manage 62:564–571 (Nov. 2009)
- EXHIBIT 4** Standing Declaration of George Wuerthner
- EXHIBIT 5** Standing Declaration of Jim Jensen
- EXHIBIT 6** Standing Declaration of Jeremy Nichols
- EXHIBIT 7** Ltr. from Larry Svoboda, Director, U.S. Environmental Protection Agency, NEPA Program, Office of Ecosystems Protection and Remediation, to Theresa Hanley, Deputy State Director, U.S. Bureau of Land Management (Sept. 25, 2010) (AR Sec. VII, Doc. 6)
- EXHIBIT 8** Shindell, Drew T. *et al.*, *Improved Attribution of Climate Forcing to Emissions*, Science 326, 716 (2009) (cited at AR Sec. IV, Doc. 5 at 11921 and AR Sec. VII, Doc. 4 at 12968)
- EXHIBIT 9** U.S. Dept. of the Interior, Sec. Or. 3226 (January 19, 2001)

## **CITATIONS TO THE ADMINISTRATIVE RECORD**

References to Federal Defendants’ administrative record are referred to by section number, document number, and bates number in the following format:

AR (section number):(document number):(bates number).

## INTRODUCTION

Oil and gas is an important source of energy. However, the development of oil and gas leases degrades land, water, and other resources, and, additionally, emits greenhouse gas (“GHG”) pollution, like methane, to the atmosphere and thereby contributes to global warming and climate change.

This tension can be resolved *if* Federal Defendants (hereinafter “BLM”) would simply: (1) consider the reasonable alternative of imposing stipulations on oil and gas leases to prevent greenhouse gas (“GHG”) pollution and increase the efficiency of energy development; (2) take a hard look at potentially significant impacts caused by methane gas, a potent GHG, over time and in conjunction with other sources of GHG emissions, by completing an Environmental Impact Statement (“EIS”) as required by the National Environmental Policy Act (“NEPA”); and (3) take a hard look at potentially significant impacts caused by the cumulative impact of oil and gas development and climate change to the environment, also by completing an EIS. Unfortunately, in its decisions executing or lifting suspensions on 120 oil and gas leases totaling 79,410 acres in Montana, BLM has failed and refused to do so, in contravention of NEPA.

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## BACKGROUND

### I. BLM'S THREE-PHASE MANAGEMENT FRAMEWORK

BLM manages oil and gas resources through a “three phase decision-making process.” *Pennaco Energy v. U.S. Dept. of Interior*, 377 F.3d 1147, 1151 (10<sup>th</sup> Cir. 2004). In the first phase, BLM prepares a Resource Management Plan (“RMP”). 43 U.S.C. § 1712. RMPs “guide and control future management actions.” 43 U.S.C. § 1601.0-2.

In the second phase, BLM executes oil and gas leases with terms and conditions for development referred to as stipulations. Stipulations, because they become part of the lease, provide lessees with notice of their development-phase obligations. AR VII:4:12963-64. Accordingly, lessees may account for these obligations in their lease bids and, if that lease is acquired, subsequent decisions regarding that lease. *Id.*; AR VII:41:13421. By law, each lease parcel in the lower forty-eight can be no more than 2,560 acres. 30 U.S.C. § 226. The issuance of a lease without a stipulation forbidding all surface disturbance on the leasehold – i.e., a “no surface occupancy” (“NSO”) stipulation – is an “irretrievable commitment of resources” requiring completion of an environmental analysis pursuant to NEPA. *Conner v. Burford*, 848 F.2d 1441, 1451 (9<sup>th</sup> Cir. 1988).

In the third phase, lessees submit an applications for permit to drill (“APDs”) for BLM’s approval so that they may exercise their lease rights. 43

C.F.R. §§ 3101.1-2, 3162.3-1(c). While BLM may deny an APD, it may do so only within the confines of the lease rights conferred to the lessee. 30 U.S.C. § 226(g); 43 C.F.R. §§ 3101.1-2, 3162.3-1(h)

This case involves the second phase of BLM's oil and gas framework, the execution of leases. In 2008, BLM consummated four oil and lease sales in Montana. Plaintiffs Montana Environmental Information Center, Earthworks, and WildEarth Guardians (collectively "MEIC") challenged BLM's leasing decisions. That case was settled through a court-approved agreement in March 2010. *See MEIC v. BLM*, 08-CV-178-DWM (D. Mont.) (Dkt. No. 54).

In accord with that agreement, BLM suspended its oil and gas leases and prepared Environmental Assessments ("EAs") for each relevant BLM Field Office ("FO"). These EAs re-evaluate the 2008 oil and gas leases and also evaluate a lease sale held on December 9, 2010. AR IV:6:11943. MEIC participated intensively in this process, including by protesting BLM's lease sale. AR IV:1-5; AR VI:1-15; AR VII:4-15.

On December 27, 2010, BLM denied MEIC's protest of the December 9<sup>th</sup> lease sale. AR IV:6. On that date, BLM, on the basis of the FO-specific EAs, also signed Decision Records ("DRs") and Findings of No Significant Impact ("FONSI") that purported to justify the sale and execution of the December 9<sup>th</sup> leases and, further, lift suspensions that had been imposed on the oil and gas leases

executed in 2008 pursuant to the March 2010 *MEIC v. BLM* settlement.<sup>1</sup> AR I:1-2 (Billings DR and FONSI); 5-7 (Butte DRs and FONSI); 10-11 (Dillon DR and FONSI); 14-16 (Lewiston DRs and FONSI); 19-20 (Malta DR and FONSI); 23-25 (Miles City DRs and FONSI). MEIC then filed this lawsuit on February 7, 2011.<sup>2</sup>

## **II. THE IMPACTS OF OIL AND GAS DEVELOPMENT IN MONTANA**

The development of oil and gas leases in Montana involves the construction and operation of a network of roads, drilling pads, pipelines, compressor stations, and other infrastructure. AR VI:2:12093 (schematic of infrastructure). This network impacts the landscape by, *inter alia*, disturbing soils, degrading water resources, reducing riparian and wetland functionality, and fragmenting wildlife habitat. AR I:26:1182-1184. The scale of this development in Montana and the Western U.S. is impressive. AR VI:6-9 (maps of BLM leases and drilling).

Global warming impacts these very same resources. “Warming of the climate system is unequivocal, as is now evident from observations of increases in

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<sup>1</sup> These EAs are virtually identical. For ease of reference, MEIC will therefore refer primarily to the Miles City EA as a representative EA. BLM did the same in its protest decision. *See* AR IV:6.

<sup>2</sup> MEIC challenges BLM’s December 27<sup>th</sup> protest decision and underlying actions that consummated the December 9<sup>th</sup> oil and gas lease sale and resulted in the execution of 73 oil and gas leases totaling 53,991 acres as well as BLM’s related December 27<sup>th</sup> decisions and underlying actions lifting the suspension of 47 oil and gas leases totaling 25,329 acres subject to the March 2010 *MEIC v. BLM* settlement.

global average air and ocean temperatures, widespread melting of snow and ice, and rising global average sea level.” AR I:28:1433. This warming is caused by anthropogenic forces. *Id.* at 1445-49. As Dr. James Hansen, the Director of the National Aeronautics and Space Administration Goddard Institute for Space Studies warns, “[o]ur home planet is dangerously near a tipping point at which human-made [GHGs] reach a level where major climate changes can proceed mostly under their own momentum.” AR VI:5:12237.

Global warming impacts these resources by exacerbating existing impacts to “[m]odern, human-dominated landscapes,” like oil and gas fields, which have “lowered resiliency to the types of nonlinear climate dynamics predicted by scenarios of global climate change.” AR VI:15:12801-02. For example, global warming creates hotter, drier conditions directly related to wildfires and, “[i]n the Western U.S., wildfires have already nearly quadrupled.” *Id.* at 1474. As the Department of the Interior in Secretarial Order 3226 explains, “climate change is impacting natural resources that the Department of the Interior (Department) has the responsibility to manage and protect.” Sec. Or. 3226, § 1 (Jan. 19, 2001) (attached as Exhibit 9); *see also* Secretarial Order 3289 (Feb. 22, 2010) (reinstating Secretarial Order 3226 and finding that “the dramatic effects of climate change...are already occurring – from the Arctic to the Everglades”).

The SIR prepared for BLM’s NEPA analyses also identifies sobering



impacts to Montana, including higher temperatures (4–5°F by the mid-21st century and 8–9°F by the end of the century), changes in precipitation patterns (wetter winters and springs, and drier summers), decreased mountain snowpack and water supplies, the complete melting of all glaciers in Glacier National Park, declining fish populations, and the closure of fishing waters. AR I:28:1475-76. Many of these impacts are not merely predicted, but observed. *Id.* at 1432-44.

Global warming is caused by the concentration of greenhouse gases (“GHGs”) in the atmosphere. *Id.* at 1455-57. GHGs are emitted by the construction and operation of oil and gas infrastructure such as compressor stations, drilling wells, and pneumatic devices. *Id.* at 1533-35. Once removed from the ground, oil and gas is sold and then used, releasing more GHG pollution. AR I:26:1171-72.

Fortunately, many of the GHGs emitted by oil and gas development are preventable. As the Environmental Protection Agency (“EPA”) documents in its Natural Gas STAR program, there are myriad technologies and practices to reduce GHG emissions that have “cross-cutting benefits on domestic energy supply, industrial efficiency, revenue generation, and [GHG] reductions.” AR VI:2:12094. The primary target of these technologies and practices is methane because methane is both a potent GHG *and* source of energy, natural gas.

In 2008, EPA’s voluntary program achieved emissions reductions equivalent to \$802 million in additional natural gas sales and avoided 46.3 million tonnes of

carbon dioxide equivalent. *Id.* A significant amount of these emissions reductions – 29 billion cubic feet of methane – occurred in the production subsector that is BLM’s purview. *Id.* at 12096. In 2010, the Government Accountability Office (“GAO”) found that BLM’s existing oversight efforts to control methane emissions suffered from “severe limitations” but that, with better oversight and the use of available technologies, 40% of the methane currently lost from BLM oil and gas operations could be economically captured, better protecting the climate and producing more energy for homes, schools, and businesses. AR V:6:12013, 35, 42.

## **ARGUMENT**

### **I. STANDARD OF REVIEW**

Pursuant to the Administrative Procedure Act, this Court “may direct that summary judgment be granted to either party based upon...review of the administrative record.” *Great Basin Mine Watch v. Hankins*, 456 F.3d 955, 961 (9<sup>th</sup> Cir. 2006). The Court shall set aside agency action that is “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law,” “short of statutory right,” or “without observance of procedure required by law.” 5 U.S.C. §§ 706 (2)(A), (C), (D).

### **II. MEIC HAS STANDING**

Article III of the U.S. Constitution requires that MEIC demonstrate standing

to bring this case. U.S. Const., Art. III, Sec. 2. “[T]he gist of the question of standing’ is whether petitioners have ‘such a personal stake in the outcome of the controversy as to assure that concrete adverseness which sharpens the presentation of issues upon which the court so largely depends for illumination.’” *Mass. v. EPA*, 549 U.S. 497, 517 (2007) (citation omitted). To establish this stake, MEIC must show that: (1) it suffered an “injury in fact;” (2) “fairly traceable” to BLM’s actions; and (3) that a favorable decision is likely to redress MEIC’s injury. *Friends of the Earth v. Laidlaw*, 528 U.S.167, 180-81 (2000). As Exhibits 1-6 demonstrate, MEIC has standing.<sup>3</sup>

### **III. BLM VIOLATED NEPA**

#### **A. BLM Failed to Consider Reasonable Alternatives**

NEPA is “our basic national charter for protection of the environment.” *Blue Mts. Biodiversity Project v. Blackwood*, 161 F.3d 1208, 1215-1216 (9<sup>th</sup> Cir. 1998) (*quoting* 40 C.F.R. § 1500.1(a)). NEPA “promotes its sweeping commitment to ‘prevent or eliminate damage to the environment’...by focusing Government and public attention on the environmental effects of proposed agency action.” *Marsh v. ONRC*, 490 U.S. 360, 371 (1989).

The heart of NEPA is an agency’s duty to “[r]igorously explore and objectively evaluate all reasonable alternatives.” 40 C.F.R. § 1502.14 (a). BLM

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<sup>3</sup> These exhibits are offered solely to establish standing.

must consider “alternatives to the proposed action” and “study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources.” 42 U.S.C. §§ 4332(2)(C)(iii), 4332(2)(E). Under NEPA, the scope of alternatives is delimited by the purpose and need of the agency action, although that purpose cannot be defined in unreasonably narrow terms. *See Ilio’ulaokalani Coalition v. Rumsfeld*, 464 F.3d 1083, 1097 (9<sup>th</sup> Cir. 2006). The “touchstone” of alternatives analysis is “whether [the] selection and discussion of alternatives fosters informed decision-making and informed public participation.” *Westlands Water Dist. v. U.S. Dept. of Interior*, 376 F.3d 853, 872 (9<sup>th</sup> Cir. 2004). “The existence of reasonable but unexamined alternatives renders a [NEPA] analysis inadequate.” *Friends of Southeast’s Future v. Morrison*, 153 F.3d 1059, 1065 (9<sup>th</sup> Cir. 1998).

Here, in each of its EAs, BLM considered only two alternatives: a “no action” alternative and BLM’s “preferred alternative.” AR I:3:19-20 (Billings EA); 8:270-72 (Butte); 12:514-15 (Dillon); 17:736-37 (Lewiston); 21:960-61 (Malta); 26:1126-27 (Miles City). In limiting its alternatives analysis to only two options (no action or BLM’s preferred alternative), BLM failed to consider the reasonable alternative of subjecting the oil and gas leases to stipulations that would prevent GHG pollution and improve the efficiency of oil and gas production by minimizing

the loss of methane gas from leaks and other events. Such stipulations include: (1) required use of GHG-reducing and efficiency-improving technologies and practices; and (2) mandatory participation in EPA’s Natural Gas STAR program (which provides oil and gas companies with assistance to reduce GHGs and improve the efficiency of oil and gas development).<sup>4</sup> AR VI:1:12075-78. Put simply, these stipulations would harness technologies and practices identified by EPA’s Natural Gas STAR program and the SIR itself. AR I:28:1548-66.

These viable and reasonable stipulations must be considered by BLM as alternatives because they fall squarely within the EAs’ purpose and need to offer “parcels for competitive oil and gas leasing...to provide opportunities for private individuals or companies to explore for and develop oil and gas resources for sale on public markets” as a means “to help meet the energy needs of the people of the United States.”<sup>5</sup> AR I:26:1122. In BLM’s own words, the EAs’ purpose was to

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<sup>4</sup> These stipulations were intended as illustrative, not exhaustive. Though ignored by BLM, MEIC explained that it was willing to entertain other types of stipulations so long as they were, in fact, stipulations and considered before leases were executed. AR VII:4:12964.

<sup>5</sup> GAO estimates that 40% of the natural gas lost to the atmosphere can be economically captured, resulting in increased energy production, \$23 million in increased royalty payments, and a reduction of GHG pollution equivalent to 16.5 million metric tons of carbon dioxide equivalent. MEIC estimates, using BLM data, that capturing methane otherwise lost from oil and gas operations within the purview of BLM’s Montana State Office would, each year, increase natural gas sales by \$9 million and prevent GHG emissions equivalent to those emitted from the electricity use of 94,737 homes. AR VII:4:12973. Of course, it may be

consider “whether to sell oil and gas leases on lease parcels identified, and, if so, what stipulations would be identified as required for specific parcels at the time of the lease sale” and, “[f]or leased parcels currently under suspension...whether the conditions under which they have been leased are still valid and in conformance with the land use plans, and whether the lease suspensions should be lifted.” *Id.* at 1123 (emphasis added).

Consideration of various lease stipulations in BLM’s alternatives analysis pertinent to GHG emissions and inefficiencies, while required by NEPA, also helps BLM satisfy its obligations pursuant to Secretarial Order 3226. Secretarial Order 3226 “ensures that climate change impacts are taken into account in connection with Department planning and decision making.” *Id.* at § 1; Exhibit 9. This Order also provides that “Departmental activities covered by this Order” include “management plans and activities developed for public lands” and the “planning and management activities associated with oil, gas and mineral development on public lands,” activities at issue in this case. *See id.* § 3. Indeed, referencing Secretarial Order 3226, EPA recommended to BLM that it carefully consider alternatives nearly identical to MEIC’s request. AR VII:65:13469-70.

EPA stated: “[c]onsistent with...Executive Branch policies [including Secretarial Order 3226], EPA recommends that BLM implement alternatives

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necessary to reduce additional emissions beyond what is economically viable to guard against climate change. Sec. Or. 3226; 43 U.S.C. § 1732(b).

and/or incorporates lease requirements that would result in the reductions of GHG emissions associated with oil and gas development.” *Id.* at 13470; *see also id.* at 13471 (“[t]he EAs and future RMPs should include a discussion of reasonable alternatives available at the leasing stage that could result in lower GHG emissions”).<sup>6</sup> EPA specifically asked “that stipulations be added to require implementation of the GHG mitigation measures developed as part of the eight environmental reviews and SIR.” *Id.* at 13469 (emphasis added). Despite EPA and MEIC’s requests, the direction included in Secretarial Order 3226, and its duty to consider alternatives, BLM refused to consider stipulations to prevent GHG emissions and improve the efficiency of oil and gas development on its leases.

In its EAs, BLM did not even bother to provide “reasons” explaining why these alternatives “were eliminated from detailed study” as required by NEPA. 40 C.F.R. § 1502.14(a); *Blue Mts.*, 161 F.3d 1208, 1214 (agency’s defense of its actions must be contained in NEPA analysis); *see also* 40 C.F.R. § 1503.4(a)(5). Instead, BLM punted the issue to the development phase, stating that “emissions reduction technologies and practices are identified as mitigation measures that could be imposed during development.” AR I:26:1181. BLM reiterated this position in its decision denying MEIC’s protest of the December 9, 2010 lease sale. AR IV:6:11946-47. BLM also said the same thing to EPA, contending that it

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<sup>6</sup> EPA’s letter is attached as Exhibit 7.

“believes the emission reductions technologies and practices identified in the Climate Change SIR are most appropriately applied at the permitting stage when specific development proposals are submitted to the BLM for review.” AR VII:72:13520. Fundamentally, this “wait and see” approach does not relieve BLM of its NEPA duties.

It is well settled that the execution of oil and gas leases that confer “surface use rights” (43 C.F.R. § 3101.1-2) commit mineral resources to development for purposes of NEPA. *Connor*, 848 F.2d 1441, 1451. As such, BLM must consider reasonable alternatives before executing oil and gas leases. *Bob Marshall Alliance v. Hodel*, 852 F.2d 1223, 1228-30 (9<sup>th</sup> Cir. 1988); *Sierra Club v. Peterson*, 717 F.2d 1409, 1413-14 (D.C. Cir. 1983).<sup>7</sup>

While BLM may profess a desire to retain “implementation-level adaptability,” AR IV:6:11946, that desire, no matter how strong, does not excuse BLM’s duty to consider reasonable alternatives to the proposed action. “NEPA requires consideration of a range of alternatives, and frank public discussion of those alternatives.” *Mont. Wilderness Assoc. v. Fry*, 310 F.Supp.2d 1127, 1143 (D. Mont. 2004). Indeed, once a lease is executed, BLM retains only limited authority to impose “reasonable measures” on the development of that lease which, by rule,

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<sup>7</sup> That a lease “does not produce any GHG emissions in and of itself” is irrelevant. AR-11947. As Intervenor Defendants noted in every declaration attached to their motion to intervene, BLM oil and gas leases confer “valuable contract and property rights.” Dkt. No. 18-1, ¶ 12; 18-2, ¶ 11; 18-3, ¶ 10; 18-4, ¶ 10.



are subordinated to “lease rights granted.” 43 C.F.R. § 3101.1-2. The execution of a lease, by conferring “surface use rights,” therefore constrains the very adaptability BLM purports to desire by surrendering the agency’s absolute authority to “prevent proposed activities if the environmental consequences are unacceptable.” *Peterson*, 717 F.2d 1409, 1415 (emphasis original).

As EPA explained in rejecting BLM’s approach:

BLM’s authority to impose reasonable lease stipulations that protect the public interest, including the environment, supports the inclusion of measures to mitigate GHG emissions associated with oil and gas development. In addition, BLM’s authority to impose additional site-specific requirements at the Application for Permit to Drill (APD) stage does not preclude BLM from establishing reasonable stipulations at the leasing stage. It is our understanding that BLM regularly includes reasonable time, place and manner of development and controlled use stipulations at the leasing stage, consistent with its authorities and obligations under the Mineral Leasing Act and the Federal Land Policy and Management Act. Many of the GHG mitigation measures analyze in the EAs and SIR should appropriately be implemented at the lease stage.

AR VII:65:13470 (emphasis added). We agree.

BLM routinely subjects leases to stipulations for a host of resources and does not defer such protections to the development phase. AR I:26:1254-56 (listing various protective lease stipulations). BLM therefore can and must explore stipulations targeting GHG emissions and oil and gas inefficiencies. At bottom, BLM must but has failed to consider the reasonable alternative of lease stipulations that prevent GHG emissions and improve the efficiency of oil and gas operations

before selling those leases. *Bob Marshall Alliance*, 852 F.2d 1223, 1228-30; *Peterson*, 717 F.2d 1409, 1413-14.<sup>8</sup>

## **B. BLM Must Prepare an EIS**

Pursuant to NEPA, BLM is required to prepare an EIS for “major Federal actions significantly affecting the quality of the human environment.” 42 U.S.C. § 4332(2)(C). In the Ninth Circuit, an EIS “must be prepared if substantial questions are raised as to whether a project...may cause significant degradation to some human environmental factor.” *Idaho Sporting Cong. v. Thomas*, 137 F.3d 1146, 1149-50 (9<sup>th</sup> Cir. 1998) (emphasis original). “To trigger this requirement a ‘plaintiff need not show that significant effects will in fact occur,’ [but instead] raising ‘substantial questions whether a project may have a significant effect’ is sufficient. *Id.*

In order to determine whether an action may cause significant impacts requiring an EIS, BLM must consider the context and intensity of the action. 40 C.F.R. §§ 1508.27(a), (b). “Context simply delimits the scope of the agency’s action, including the interests affected.” *NPCA v. Babbitt*, 241 F.3d 722, 731 (9<sup>th</sup> Cir. 2001). Intensity means “the severity of the impact” and is determined by

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<sup>8</sup> MEIC and BLM’s March 2010 settlement agreement provided that BLM “void or terminate” oil and gas leases after it had completed the NEPA review process, if, e.g., additional stipulations were necessary or appropriate. *MEIC v. BLM*, 08-CV-178 DWM (Dkt. Nos. 53-1 at ¶ 8 and 54).

looking at ten different criteria, including, here, whether the impacts are “highly controversial,” whether there are uncertainties or unknown risks associated with those impacts, and whether the action is related to other actions with cumulative impacts. 40 C.F.R. §§ 1508.27(b)(1)-(7). “Any one of the ten factors standing alone may be sufficient to require preparation of an environmental impact statement.” *Forest Serv. Employees for Env'tl. Ethics. v. U.S. Forest Serv.*, 726 F.Supp.2d 1195, 1215 (D. Mont. 2010) (*citing NPCA*, 241 F.3d 722, 731). If and when BLM “decides not to prepare an EIS, ‘it must put forth a convincing statement of reasons’ that explain why the project will impact the environment no more than insignificantly.” *Ocean Advoc. v. U.S. Army Corps of Engrs.*, 402 F. 3d 846, 864 (9<sup>th</sup> Cir. 2005).

Here, BLM’s violated NEPA because it did not provide any convincing statement of reasons explaining why the impacts of its oil and gas leasing decisions are not significant. Moreover, as detailed below, three of the ten significance factors are implicated by BLM’s lease decisions. BLM has therefore not justified its decisions to proceed on the basis of EAs. *See id.*

### **1. BLM’s Decisions Are “Highly Controversial”**

Pursuant to NEPA, BLM’s actions are “highly controversial” when there is “a substantial dispute [about] the size, nature, or effect of” BLM’s actions. 40 C.F.R. § 1508.27(b)(4); *Blue Mts.*, 161 F.3d at 1212. Here, such a dispute exists

over BLM's oil and gas leases for three reasons: (1) BLM grossly underestimated methane's long-term (100-year) warming impacts; (2) BLM failed to account for methane's short-term, 20-year warming impacts which are even more serious and severe than the long-term effects; and (3) BLM failed to address inefficiencies and waste involved in the development of oil and gas leases.<sup>9</sup>

First, BLM grossly underestimated methane's long-term impacts. BLM's SIRs and EAs rely on a 100-year global warming potential for methane of 21. AR I:28:1427; AR IV:6:11953. More recent peer-reviewed science referenced in the record shows, however, that gas-aerosol interactions amplify methane's impact such that methane's 100-year GWP is 33, not 21. AR VII:4:12968; Exhibit 8 (study referenced in record and provided to explain technical material). Thus, BLM understated methane's 100-year warming impact by 57%. BLM's decision to ignore this science is highly controversial because it creates "a substantial dispute [about] the size, nature, or effect of" of the agency's decisions. *Blue Mts.*, 161 F.3d 1208, 1212; 40 C.F.R. § 1509.27(b)(4).

Second, BLM refused to consider methane's short-term, 20-year warming

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<sup>9</sup> BLM's underestimation of methane's long- and short-term warming impacts, and refusal to address inefficiencies and waste in oil and gas development, is not only "highly controversial" but also demonstrates BLM's failure to take a hard look at the direct, indirect, and cumulative impacts that methane releases are having on the environment – including the very mineral resource BLM seeks to exploit – as required by NEPA and directed by Secretarial Order 3226. *See* 40 C.F.R. §§ 1508.7, 1508.8.

impacts. Methane is indisputably a potent GHG. But methane's warming impact or "global warming potential" is significantly greater in the short term than the long term. Over a 20-year time period, methane is 105 times as potent as an equivalent amount of carbon dioxide. AR VII:4:12968; Exh. 8. Over a 100-year time period, however, methane's warming impact is still potent, but less so, with 33 times the warming impact of an equivalent amount of carbon dioxide. *Id.*<sup>10</sup>

The SIR acknowledges that methane has different short and long term warming impacts but only uses methane's 100-year global warming potential – and an outdated potential at that – to calculate impacts. AR I:28:1427, 49. BLM's EAs incorporate the SIR's GHG emissions calculations and therefore also use that outdated 100-year methane global warming potential of 21. AR I:26:1177-78. As a consequence, BLM failed to consider methane's more serious, short-term 20-year warming impact using the best available science, an impact 400% greater in a 20-year time period than the 100-year time period assumed by BLM. This is a major, highly controversial oversight by BLM that creates a substantial dispute about the size, nature, and effect of BLM's actions. *Blue Mts.*, 161 F.3d 1208, 1212.

BLM may deflect attention away from its controversial failure to address methane's short-term, 20-year warming impact by claiming that EPA's 100-year global warming potentials are codified in Clean Air Act rules and that BLM's

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<sup>10</sup> This difference is because methane, once emitted, stays in the atmosphere ~12 years while carbon dioxide stays in the atmosphere ~50-200 years. AR I:28:1449.

analysis and application of global warming potentials is consistent with EPA's approach. *See* AR IV:6:11953. If it did, BLM would be misplaced. EPA's rules were not intended and do not supplant BLM's duty under NEPA to consider the short-term impacts of its actions, here methane's 20-year warming impacts. 40 C.F.R. § 1508.27(a).

BLM may also claim that the use and analysis of multiple global warming potentials for different time frames would be difficult to describe as the agency's Reasonably Foreseeable Development Scenarios' ("RFDS") temporal scales vary.<sup>11</sup> *See* AR IV:6:11953. But if BLM can apply a 100-year warming potential to address the impacts of development anticipated by its RFDS, it can apply a 20-year warming period as well. Indeed, the 10-20 year time periods used in the RFDS best correspond with methane's 20-year global warming potential and ~12-year residency time in the atmosphere.

BLM may further claim that the use of multiple time-frame global warming potentials would be misleading given "time-lag discrepancies between emissions reduction and atmospheric changes," and that the 100-year global warming potential assessment timeframe addresses those pollutants that are in the air long-term. *Id.* But while 100-year global warming potentials certainly address "those pollutants that are in the air long-term," so to do 20-year global warming

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<sup>11</sup> BLM's RFDS consider 10-20 years of development. AR I:28:1486, 1489, 1493, 1497, 1500, 1513.

potentials. Methane is, by definition, a “[l]ong-lived” GHG even though it is in the atmosphere only ~12 years. AR I:28:1446 (figure 2-14).

The very point of the 100- and 20-year global warming potentials is to provide a means of evaluating GHG warming impacts over different time periods or, as NEPA provides, in the “context” of *both* “short-term and long-term effects....” 40 C.F.R. § 1508.27(a); *see also Anderson v. Evans*, 371 F.3d 475, 490 (9<sup>th</sup> Cir. 2004). BLM’s failure to consider methane’s short-term warming impacts is therefore “highly controversial” and raises substantial questions rendering BLM’s decisions to rely on EAs unlawful. *Thomas*, 137 F.3d 1146, 1149-50.

Third, BLM’s leasing decisions are “highly controversial” because BLM has the capability but refuses to address inefficiencies and waste involved in the development of oil and gas leases in Montana. Methane is a potent GHG *and* source of energy more commonly referred to as natural gas. Each year, oil and gas development in the Billings, Butte, Dillon, Hi-Line, Lewiston, Miles City cumulatively emits, according to BLM, 24,490.4 short tons of methane per year.<sup>12</sup>

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<sup>12</sup> This amount may be significantly underestimated as EPA found that certain emissions sources, such as well completions and workovers, were “significantly underestimated in the U.S. GHG Inventory” and thereafter revised its estimate of production stage emissions upwards 107% from 90.2 to 186.4 million metric tons of carbon dioxide equivalent. AR VII:8:13048, 49. With well completions and workovers, for example, the underestimate was dramatic; in its 2008 U.S. GHG Inventory (published in 2010), EPA estimated that, on average, each well completion or workover emits 3 Mcf of methane (each Mcf is a thousand cubic feet). AR VII:4:12966. In its later review review, EPA estimated that each well

AR I:28:1536-41.

Every ton of methane emitted to the atmosphere from oil and gas development is a ton of natural gas lost. Every ton of methane lost to the atmosphere is therefore a ton of natural gas that cannot “help meet the energy needs of the people of the United States.” AR I:26:1122. Methane lost from federal leases (8,549.3 short tons per year) may also not pay royalties otherwise shared between federal, state, and local governments. AR I:26:1172. This lost gas reflects serious inefficiencies in how BLM oil and gas leases are developed. AR VII:4:12965, 69, 70-75.

Some inefficiencies may constitute “waste,” a legal term of art.<sup>13</sup> In other instances, inefficiencies reflect barriers that prevent the use of methane-reducing technologies and practices, such as those identified by GAO, including “‘institutional inertia’ – a company’s tendency to do business and carry out operations as it always has.” AR V:6:12040. Regardless of cause, these inefficiencies can and should be addressed by BLM through NEPA. Even putting

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completion or workover, on average, actually emits 9,175 Mcf of methane. AR VII:8:13123. The 2008 U.S. GHG Inventory was therefore off by a factor of 3,058. EPA’s findings further underscore the controversial nature of BLM’s deficient consideration of methane’s impacts.

<sup>13</sup> Waste is defined as any unsanctioned act or failure to act resulting in: “(1) A reduction in the quantity or quality of oil and gas ultimately producible from a reservoir under prudent and proper operations; or (2) avoidable surface loss of oil or gas.” 43 C.F.R. § 3160.0-5.



aside their climate impact, these inefficiencies negatively impact the mineral resource and increase the pressure to lease and develop oil and gas from other lands, risking additional impacts to the environment. 40 C.F.R. § 1508.8(b).

BLM, however, adopts a highly controversial position, refusing to even acknowledge let alone take the requisite hard look at such inefficiencies through NEPA.<sup>14</sup> Instead, BLM evaluates methane emissions only as a contributor to climate change. BLM thus “entirely failed to consider [this] important aspect of the problem” associated with its oil and gas leasing decisions. *Motor Veh. Mfrs. Assn., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983).

## **2. BLM’s Decisions Risk Cumulatively Significant Impacts**

BLM must assess whether its actions are “related to other actions with individually insignificant but cumulatively significant impacts.” 40 C.F.R. § 1508.27 (b)(7). Significance “exists if it is reasonable to anticipate a cumulatively significant impact on the environment.” *Id.* BLM cannot avoid cumulatively significant impacts “by terming an action temporary or by breaking it down into

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<sup>14</sup> BLM may point to the existence of policies that purport to prevent “waste” to justify the agency’s failure to consider this issue. However, as described above, not all inefficiencies may constitute waste. Moreover, GAO found that BLM’s policies that purport to prevent waste suffer from “severe limitations.” AR V:6:12042. Thus, BLM’s own failed policies contribute to the highly controversial nature of the agency’s leasing decisions here. Ultimately, BLM’s duty to address these inefficiencies through NEPA is necessary to inform the agency’s decision to execute oil and gas leases; inefficiencies may prove so great or irremediable that leases should not be executed.

small component parts.” *Id.*

In this case, BLM admits that the development of oil and gas leases impacts the environment. AR I:26:1182-95. BLM also admits that climate change impacts the environment. AR I:26:1133-38. BLM, however, failed to take the logical next step: a hard look at the cumulative impacts of oil and gas development and climate change to the environment. AR VI:112083-88 (describing importance of taking a hard look at these cumulative impacts). By definition, a cumulative impact is:

the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time

40 C.F.R. § 1508.7.

Instead of considering such impacts when issuing oil and gas leases, BLM merely listed observed and predicted climate change impacts without evaluating those impacts in combination with the impacts caused by oil and gas development to specific resources. Put differently, BLM assumed a static climate even though BLM otherwise knows that the climate is changing. This is a chronic deficiency that pervades all of BLM’s EAs.

For every single non-air resource, e.g., soils, water, and wildlife, BLM evaluates the direct and indirect impacts of oil and gas development, but does not evaluate how climate change will add to those impacts. AR I:26:1182-95. Nor does

BLM complete that hard look in its cumulative impacts section. *Id.* at 1198-1200. Instead, BLM's cognizance of climate change is limited to a laundry list of generalized climate change impacts segregated from the EA's analysis of impacts to specific resources. *Id.* 1134-38. Thus, for example, BLM notes that, because of climate change, "[m]ore frequent, more severe, and possible longer-lasting droughts are expected to occur." *Id.* at 1135. Yet, when one turns to the EA's analysis of impacts to water resources, as well as to the various aquatic resources that rely on water, there is no mention of this predicted climate change impact, let alone any mention of the cumulative impact of oil and gas development and climate change. *Id.* at 1182, 85. 89. In so doing, the EAs fail to explain how "individual impacts might combine or synergistically interact with each other to affect the...environment" as required by NEPA. *Klamath-Siskiyou Wildlands Ctr. v. BLM*, 387 F.3d 989, 997 (9<sup>th</sup> Cir. 2004).

BLM justifies this failure by claiming that "the current state of science does not allow determinations to be made about the specific effects of specific actions with regard to the issue of impacts to global climate change (GCC)." AR IV:6:11950. For this reason, BLM conveniently maintains, citing 40 C.F.R. § 1502.22, that "preparation of an EIS is not warranted, as it would not provide further meaningful analysis with respect to the significance, or lack thereof, of this proposed action as to the issue of GCC or GHG emissions." *Id.* BLM is wrong.

As an initial matter, BLM’s EAs, “no matter how thorough...can never substitute for preparation of an EIS if the proposed action could significantly affect the environment.” *Anderson*, 371 F.3d 475, 494. Moreover, the issue is not, as BLM mischaracterizes it, the direct effect of GHGs emitted by the development of oil and gas leases, i.e., the “specific effects of specific actions,” but rather the “[c]umulative” impacts of oil and gas development (such as to water resources from the reduction of “riparian/wetland functionality,” AR I:26:1183) when combined with the impacts of climate change (such as to those same “riparian/wetland” resources from drought, *id.* at 1135), regardless of cause. Compare 40 C.F.R. § 1508.8 (defining direct impacts) with 40 C.F.R. § 1508.7 (defining cumulative impacts). EPA, for instance, recognized this distinction, recommending to BLM that “the climate change analysis in the EAs be revised to focus on overall climate change as the impact of concern rather than trying to connect local expressions of climate change (e.g. increased frequency of drought and fires) with the proposed decisions” and that “[r]egional and local expressions of climate change (and modeling difficulties for small areas) should be factored into NEPA analyses as part of the cumulative impact for affected resources” AR VII:65:13470-71.

Consistent with EPA’s comments, NEPA’s hard look does not require the level of scientific certainty suggested by BLM. On the contrary, as explained by

the Ninth Circuit: “Reasonable forecasting and speculation is...implicit in NEPA, and we must reject any attempt by agencies to shirk their responsibilities under NEPA by labeling any and all discussion of future environmental effects as ‘crystal ball inquiry.’” *Save Our Ecosystems v. Clark*, 747 F.2d 1240, 1246 n.9 (9<sup>th</sup> Cir. 1984 (citation omitted)). NEPA’s hard look instead requires only “a reasonably thorough discussion of the significant aspects of the probable environmental consequences” to “foster both informed decision-making and informed public participation.” *Ctr. for Biological Diversity v. NHTSA*, 538 F.3d 1172, 1194 (9<sup>th</sup> Cir. 2008). In fact, the very provision BLM cites to justify its failure to consider cumulative impacts, 40 C.F.R. § 1502.22, requires the agency to make reasonable efforts to evaluate impacts even in the face of scientific uncertainty. BLM however, has failed to do so here.

### **3. BLM’s Decisions Risk “Highly Uncertain” and “Unknown Risks”**

NEPA obligates BLM to consider the “degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.” 40 C.F.R. § 1508.27(b)(5). When such “highly uncertain” or “unknown risks” are involved, BLM must prepare an EIS to “obviate the need for speculation by insuring that available data are gathered and analyzed prior to the implementation of the proposed action.” *NPCA*, 241 F.3d 722, 732. This is

precisely the situation here. BLM, as detailed above, failed to take a hard look at methane's long- and short-term warming impacts, failed to take a hard look at inefficiencies – i.e., lost methane gas – in the development of oil and gas resources, and failed to take a hard look at the cumulative impact of oil and gas development and climate change. These failures are, as described above, “highly controversial” and raise questions regarding “cumulatively significant impacts,” but also separately raise substantial questions regarding “highly uncertain” and “unknown risks.” 40 C.F.R. §§ 1508.27(b)(4), (5), (7).

In sum, when viewed individually or in the aggregate, substantial questions exist as to whether BLM's oil and gas leasing decisions may result in “significant” impacts. *Ocean Advoc*, 402 F. 3d 846, 865 (one significance factor “may be sufficient to require” an EIS); *accord*, *NPCA*, 241 F. 3d 722, 731. BLM has simply not provided convincing reasons that its decisions do not, in light of these substantial questions, cause insignificant impacts. *Id.* at 864. Instead, its FONSIIs present only “[c]onclusory assertions” that its leasing decisions “will have only an insignificant impact on the environment” – assertions that do not satisfy NEPA. *Id.*; AR I:2 (Billings); 7 (Butte); 11 (Dillon); 16 (Lewiston); 20 (Malta); 25 (Miles City). Because BLM must, at a minimum, offer a substantive analysis or evaluation of NEPA's significance factors that it did not, in fact, offer, BLM cannot justify its leasing decisions on the basis of its EAs. *Id.*

## CONCLUSION

For the foregoing reasons, BLM's oil and gas leasing decisions violate NEPA and are "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law," "short of statutory right," and "without observance of procedure required by law" and should be "h[e]ld unlawful and set aside." 5 U.S.C. §§ 706(2)(A), (C), (D).

Respectfully submitted this 20th Day of October, 2011,

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### **CERTIFICATE OF SERVICE**

I hereby certify that on the 20th day of October, 2011 I filed a copy of this document (along with a copy of Plaintiffs' motion, statement of material facts, and exhibits) electronically through the CM/ECF system, which caused all parties or counsel to be served by electronic means as more fully reflected on the Notice of Electronic Filing.

/s/ Erik Schlenker-Goodrich  
Erik Schlenker-Goodrich

### **CERTIFICATE OF COMPLIANCE**

I, the undersigned counsel of record, hereby certify that this brief is proportionally spaced, has a typeface of 14 points or more, and contains 6,498 words. I relied on Microsoft Word to obtain the word count.

/s/ Erik Schlenker-Goodrich  
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